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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/527,354

03/10/2005

Takashi Nishihara

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05/29/2008

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EXAMINER

MULVANEY, ELIZABETH EVANS

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

05/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|---|--|
| Office Action Summary | Application No. 10/527,354 | Applicant(s) NISHIHARA ET AL. | |
| | Examiner Elizabeth E. Mulvaney | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-17, 20-22 and 25-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-17, 20-22 and 25-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/24/08</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed 2/4/08 have been fully considered. Applicant argues that the primary reference (2002/0160306) does not disclose the composition for the recording layer in claim 1. Applicant also argues that the crystallization nucleation layer composition is not disclosed. While it is agreed that the recording material is not found, the crystallization nucleation material is disclosed. In paragraphs [0099-0103], the materials used are clearly defined. The crystallization accelerating material is chosen from Group IV or V materials, preferably Bi, Te or Sb. The record stabilization material is preferably chosen from Ge, Cu, In, B or N. The preferable material disclosed is Bi-Ge with an additive. The additive for adjusting properties such as melting point or crystallization speed are chosen from a list of 40 elements including La, Ce, and Pr. It is recognized that the instant crystallization nucleation material is chosen from Bi and/or Te in combination with 14 possible elements where the reference can be Bi and/or Te combined with a possible of 40 additive elements. However, it is clear what the combinations are and that within those combinations lies the claimed material i.e., Bi-Ge-La, Bi-Ge-Ce, etc. read on the claimed crystallization nucleation material.

Again, it is recognized that the reference does not teach the specific recording material. However, as stated in the previous Office Action, US 5,221,588 does encompass the recording material claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-10, 12, 13, 15, 32, 33, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0160306 in view of US 5,221,558.

As stated above, the '306 reference discloses the crystallization nucleation material and the '558 reference discloses the recording material. It would have been obvious to substitute the recording material in the '558 reference for the recording material in the '306 reference as the substitution of phase-change materials would yield predictable results.

Claims 4 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0160306.

See previous Office Action.

Claims 14, 17, 20-22, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0160306 in view of US 6,670,014.

See previous office Action.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0160306 in view of US 6,432,502.

See previous office Action.

Claims 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0160306 in view of US 6,670,014 further in view of US 6,723,411.

See previous office Action.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth E. Mulvaney whose telephone number is 571-272-1527. The examiner can normally be reached on Monday-Friday 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth E. Mulvaney/

Primary Examiner, Art Unit 1794

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